

According to the New Syllabus

Prescribed by

Punjab Information Technology Board

STAR

# COMPUTER SCIENCE



Donated by:

Name All (BRC) | Warner College

Panjgoor.



Written by Khurram Arslan



NEW STAR BOOK DEPOT 12-Urdu Bazar, Lahore-Pakistan.

## LIST OF PRACTICALS

According to the National Curriculum on Computer Science for ICS-Part 2 (Class - XII)

## Microsoft Access

No.	Practical	
1.	Create different tables and assign primary key.	
2.	Create simple queries using wizard and design view.	
3.	Create relationship between tables.	
4.	Create simple forms using wizard and design view.	-
5.	Create reports using wizard and design view.	
6.	Use of summary and calculated fields.	

## C Language

No.	Practical
1.	Writing a program which prints a text of 4 lines consisting of characters, integer values and floating point values using printf statement.
2.	Writing a program that reads and prints the data using Escape Sequence, (Asking the name, age, height and gender of the student using scanf and printf statements).
3.	Writing a program which uses operators (Calculate the area of triangles, volume of spheres and arrange the resultant values in ascending order).
4.	Writing a program which uses 'for' loop statement (Generate the multiplication table from 2 to 20).
5.	Writing a program which uses 'while' loop and nested 'while' loop (Use 'for' loop and continue the process in 'while' loop satisfying this condition.
6.	Finding the factorial of N using 'while' loop, read value of N using scanf, and print the factorial of various N.
7.	Draw a checkerboard and print it using if-else statement, and extend the program using nested if-else.
8.	Writing a program which uses a 'switch' statement and breaks the program if certain condition is observed. Repeat the program with 'case' statement.
9.	Writing a function which generates factorial of N and calls this function in the 'main' program.
10.	Writing a program which uses multiple arguments in a function (Develop a user-defined function to generate a rectangle. Use the function for passing arguments to draw different sizes of rectangles and squares.)

# **Contents**

Part	f A	
	osoft Access	
1.	How would you start Microsoft Access?	
2.	How would you open and close an existing database?	
13.	How would you 1. Create a new Database?, 2. Create a new Table?, 3. Add a field name?, 4. Set the data type?	•
	5. Add a field description?, 6. Set a primary key?, 7. Save a new table?	1
	How would you Add, Delete and Restore data from a table?	1
5.	How would you sort the records of a Table in a field?	1
	How would you copy and move data in a Table?	1
	How would you find and replace data in a table?	2
8.	How would you format data in a Table?	2
9.	How would you switch between Table Design view and Datasheet view?	2
10.	How would you 1. Change a field name?, 2. Insert a new column/field?, 3. delete a column/field?	2
3-11.	How would you 1. Open the relationship window?, 2. Add tables to the relationship window?	ੌ
0.2	3. Create a relationship between two tables?	2
12.		3
2 - 13.		3
2 -14.	How would you create a simple query using Design View?	3
15.		3
4-16.	How would you create a Form using Form Wizard?	3
17.	How would you create a multiple table Form using Form Wizard?	4
4 -18.	How would you create a Form using Design View?	4
19.	How would you add, edit records through Form?	4
5-20.	How would you create a single table Report using Report Wizard?	4
J-21.	How would you create a multiple table Report using Report Wizard?	4
-	How would you create a Report using Design View?  How would you Open, View and Print existing Report?	52
23.	How would you open, view and Frint existing Report	
0		
Park		53
C La	nguage .	65
1.	Write a program to print here on the	66
- 2.	Write a program which prints the minimum and maximum values of an integer.	67
3.	Write a program to compute the area of a rectangle.	68
4.	Write a program which prints a text of 4 lines consisting of characters, integer values and floating point values	
J 5.	using printf statement.	69
6	Write a program to read in 3 integers and print their sum.	70
7.	White a program to read in two integers and display one as a percentage of other.	71
9 8.	Write a program that reads and prints using Escape Sequence, (Asking the name, age, neight, gender of the	
~	students using scanf and printf statements.	72
9.	Write a program to calculate the area of a circle.	73
10.	Write a program to read in two integers and display which one is the largest.	74
11.	Write a program which uses operators (calculate the are of triangles, volume of sphere and arrange the	
3	resultant values in ascending order).	75
12.	Write a program to read in 5 numbers and compute the average, maximum and minimum values.	76
13.	Write a program to print a simple triangle of asterisks.	77
11-14.	Write a program which uses 'for' loop statem ent (generate the multiplication table from 2 to 20).  Write a program which uses 'for' loop statem ent (generate the multiplication table from 2 to 20).	78
15.	Write a program to print the numbers between 1 and 10, along with an indication of whether each is even or odd.	
	the land and posted tubile land for loop and continue the process in Linux	80
5-17.	Write a program which uses 'while' loop and nested 'while' loop (use 'for' loop and continue the process in 'while'	٠.
	1 11 I I a mend value of Nursian conf. and print factorial of variances	81
€ —18.		82
7-19.	the price of different fruits listing switch state	83
20.		84
8 -21.	the program with case statement.	0.
22	Write a function celsius() to convert degrees Fahrenheit to degrees Celsius.	85
A - 23	Write a function, which generates factorial of N and calls this function in the 'main' program	86
24	Write a program which uses multiple arguments in a function (develop a user- defined function to generate	0/
(0	rectangle. Use the function for passing arguments to draw different sizes of rectangles, and course	

Microsoft

Access

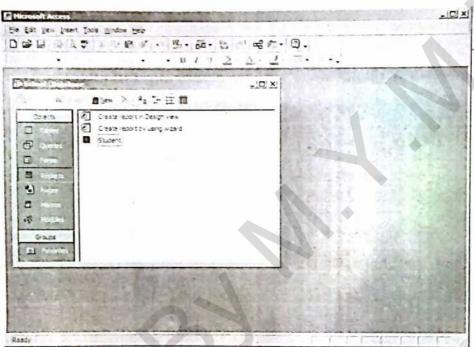


Star Computer Practical Notebook I.C.S. Part 11

## Microsoft Access

#### Introduction to Access

Access is a database management system (DBMS). Access stores and retrieves information (often referred to as data), presents requested information, and automates repetitive tasks (such as maintaining accounts payable or a personnel system, and performing inventory control and scheduling). With Access you can create easy-to-use input forms. You can display your information in any way that you want and run powerful reports.



The Access window

### The Access window

When you first open Access, you see the Access window show-ing a title bar with the Microsoft Access caption and its menu bar and toolbar. The Access window is the center of activity for everything that you can do in Access. From this window, you can open many other windows simultaneously each window displays a different view of your data. Above figure shows the Access window with a Database window open. The title bar of the Database window displays the title of the database followed by the word Database.

Title bar. You can tell which program is currently active by the name of the program that you see displayed on the title bar. The title bar displays the name Microsoft Access, the Control menu, and the Minimize, Restore/Maximize, and Close buttons. The title bar displays the text 'Microsoft Access' by default. When you are viewing a table, form, or other object, the title bar also displays the name of the object in brackets and the object type if the window is maximized; for example, Microsoft Access — [Students: Table].

Control menu button. This button is found in the upper-left corner of the title bar. When you click this button, a menu appears that lets you perform certain tasks, including moving, sizing, minimizing, or closing the current application window. When you double-click the Control button, you automatically exit the application.

Minimize button. This is the first of a set of three buttons on the right side of the title bar; it shows a dash at the bottom of the box. Clicking this button reduces Access to an icon on the Windows taskbar. Access continues to run, and you can redisplay it by clicking the icon on the taskbar.

**Restore/Maximize.** This middle button takes on two looks: Two overlapping boxes when you maximize the window or a square with a dark top when you restore the window to its previous size.

Close button. This right-most button has an X on it and closes Access when you click it.

Menu bar. The menu bar contains commands. When you click a name, a list drops down, offering a selection of commands. Depending on what you are working on, the items on the menu bar and the choices found on each menu vary. The pictures on the menus correspond to pictures on the toolbar. In Access, you can completely customize the menu bars and toolbars.

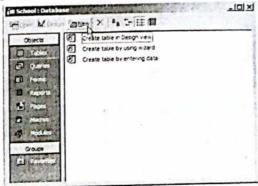
**Toolbar.** The toolbar is a group of picture buttons just below the menu bar; it provides shortcuts for running commands. The buttons on the toolbar vary depending on what you are working on. You can resize and move the toolbar by clicking between buttons and moving it around the screen. You can also select View .Toolbars to show, hide, define new, or customize different tool-bars; you can use the same command to select large or small buttons, turn off tooltips, and even display monochrome buttons.

**Status bar.** The left side of the status bar, at the bottom of the window, dis-plays helpful information about what you are currently doing. In the figure, the status bar simply says Ready. The right side of the status bar tells you whether certain keyboard settings are active. For example, if you have the Caps Lock feature turned on, the word *CAPS* appears in the status bar.

**Database window.** This window appears whenever a database is open; it is the control center of your database. You use the Database window to open the objects within a database, including tables, queries, forms, reports, macros, and modules.

## The Database window

The Database window consists of three basic parts: A set of seven object buttons in a vertical row on the left side, a set of eight toolbar buttons along the top of the window, and a list of object names in the right pane.



**Object buttons.** These buttons are located in a vertical row along the left side of the Database window. Using these buttons, you can select the type of object you want to work with. For example, selecting the Form button dis-plays a list of forms created for that database. Selecting this button also lets you create a new form or redesign an existing one.

**Toolbar buttons.** You use the toolbar buttons, which are located along the top of the Database window, to change a database object in a different window or view. These buttons let you create, open, or design a database object and view certain details about those database objects.

**Object list.** This list displays existing objects for the database object that you select. You can choose a name from the list to display or redesign the object. You can also select what type of view you want for these objects. For example, you can view the details about your database objects, such as description, date modified, date created, and type.

You can change the view of the objects in the Object list by selecting View from the Access window menu bar or by using the buttons on top of the database window (the last four buttons on the right side of the database window).

## The Database Terminology of Access

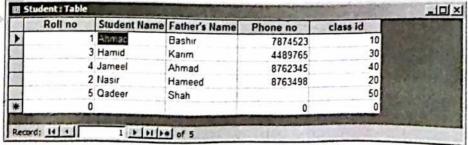
#### Database

In Access, a database is the overall container for the data and associated objects. It is more than the collection of tables; rather, it includes all objects. Database objects include tables, queries, forms, reports, data access pages, macros, and modules. In some computer software products, the database is the object that holds the actual data; in Access, this is called a table. Other products refer to the database as the collection of all tables related to the system.

Access can work with only one database at a time. Within a single Access database, however, you can have hundreds of tables, forms, queries, reports, pages, macros, and modules —all stored in a single file with the file extension .MDB.

#### **Tables**

The table is the container for raw information (called data). When you enter data in Access, a table stores it in logical groupings of similar data and the table's design organizes the information into rows and columns.



#### A table displayed in a datasheet

#### Records and fields

As above figure shows, the datasheet is divided into rows called *records* and columns called *fields*, with the first row (heading on top of each column) containing the names of

the fields in the database. The data shown in the table has columns of similar information, such as Student Name, Father's Name, Phone no, or class id;

These columns of data items are fields. Each field is identified as a certain type of data (Text, Number, Date, and so on) and has a specified length. Each field has a name that identifies its category of information.

#### **Values**

At the intersection of a row (record) and a column (field) is a value —the actual data element. For example, Student Name, Father's Name in the first record, represents one data value. Questions you may ask – How do you identify the first record? It's sitting in the first row of the datasheet and is the record with the Ahmad. But what if you have more than one Ahmad in your database? Whereas fields are known by the field name, records are usually identified by some unique characteristic or value within one or more of the fields of the record. This unique value makes each record different from all the other records. In the Students table, the field that makes each record unique is the Roll no; fields like the Student Name or Father's Name are not unique because you may have two students named Ahmad or more than one Bashir in the table.

## Access Database Objects and Views

The Access database contains seven objects, which consist of the data and tools that you need to use Access:

Table. Holds the actual data (uses a datasheet to display the raw data)

Query. Lets you search, sort, and retrieve specific data

Form. Lets you enter and display data in a customized format

Report. Lets you display and print formatted data, including calculations and

totals

x Pages. Lets you publish live forms to a corporate intranet

**Macro.** Gives you easy-to-use commands to automate tasks without

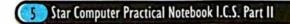
Programming

xModule. Program written in VBA

#### **Datasheets**

Datasheets are one of the many ways by which you can view data. Although not a database object, a datasheet displays a list of records from a table in a format commonly known as a browse screen or table view. A datasheet displays data as a series of rows and columns (comparable to a spreadsheet). A datasheet simply displays the information from a table in its raw form. This spreadsheet format is the default mode for displaying all fields for all records.

You can scroll through the datasheet using the directional keys on your keyboard. You can also display related records in other tables while in a datasheet. In addi-tion, you can make changes to the displayed data. However, use caution when making any changes or allowing a user to make any modifications in this format. When a datasheet record is changed, the data in the underlying table is the data actually being changed.



Queries and dynasets

You use a query to extract information from a database. A query can select and define a group of records that fulfill a certain condition. You can use queries before printing a report so that only the desired data is printed. You can also use a query with forms so that only certain records (that meet the desired criteria) appear on screen. You can also use queries within procedures to change, add, or delete database records.

**Data-entry and display forms** 

Data-entry forms help users get information into a database table quickly, easily, and accurately. Data-entry and display forms provide a more structured view of the data than what a datasheet provides. From this structured view, database records can be viewed, added, changed, or deleted. Entering data through the data-entry forms is the most common way to get the data into the database table.

Reports

Reports present your data in printed format. You can create several different types of reports within a database management system.

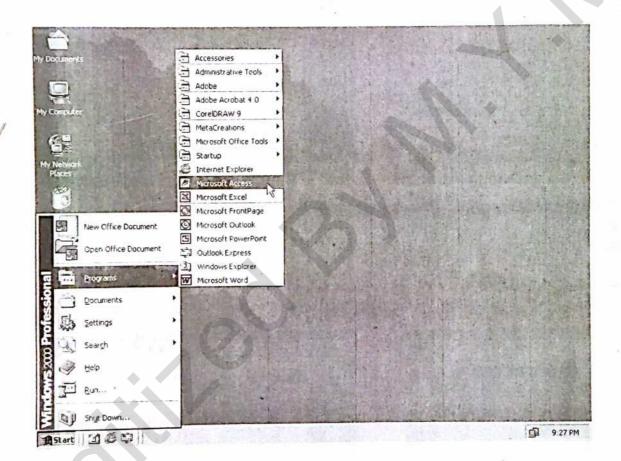


How would you start Microsoft Access?

## To start Microsoft Access

- Click on the Start button to pop up the Start menu
- Point the mouse pointer on the **Programs**. It will display list of programs, which you have installed earlier.

Click on Microsoft Access from list of programs to run it.

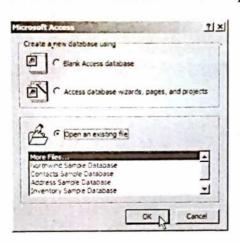


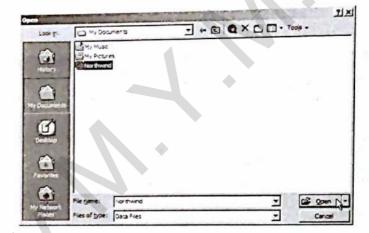


# How would you open and close an existing database?

## To open a database when you start Access

- From the opening dialog, select the Open an existing file option.
- Click on OK button to display Open dialog window.
- L Select the File name and click on Open button to open the database.



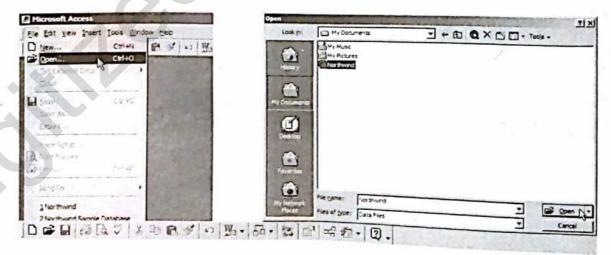


## To open a database, once Access has already started

- Click on File menu from the menu bar.
- Choose Open from the File menu to display Open dialog window.

#### OR

- Click on the Open icon on the Standard toolbar to display Open dialog window.
- Select the File name from the file list box and click on Open button to open the database.



### To close a database

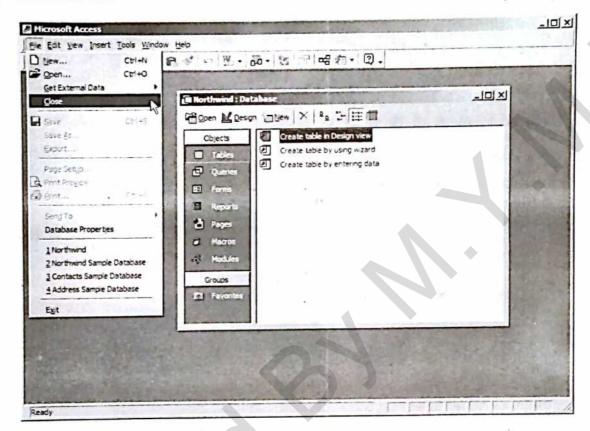
- Click on File menu from menu bar.
- L Choose Close from the File menu.

OR

- Click in the Control menu box in the database windows.
- Choose Close from the menu.

OR

□ Press Ctrl+F4



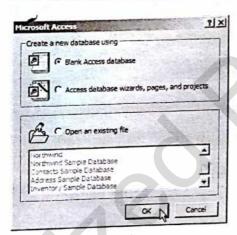
- 1. Create a new Database?
- 2. Create a new Table?
- 3. Add a Field Name?
- 4. Set the data type?
- 5. Add a Field description?
- 6. Set a Primary Key?
- 7. Save a new Table?

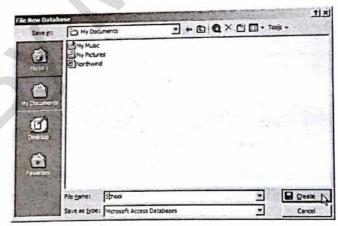
## **Creating a Database**

## To create a database when you start Access

- From the opening dialog, select the Blank Access Database option.
- Click on the OK button to display File New Database dialog window.

- Type the file name in File name combo box.
- Click on Create button to finish process.



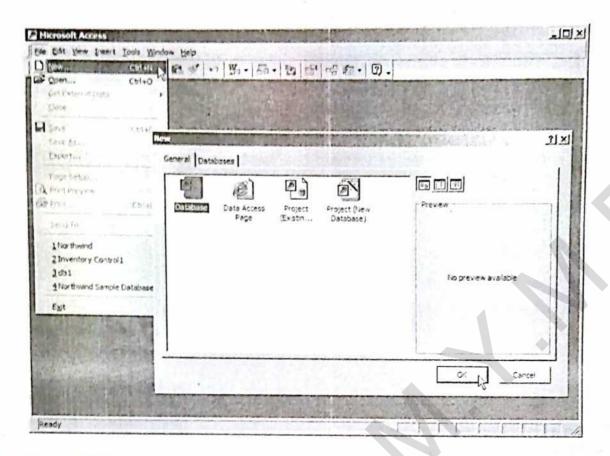


## To create a database, once Access has already started

- Click on File menu from the menu bar.
- Choose New from the File menu to display New dialog window.
- Choose Database icon on the General tab from the tab list.
- Click on the OK button to display File New Database dialog window.
- Type the file name in File name combo box.
- Click on Create button to finish process.

## OR

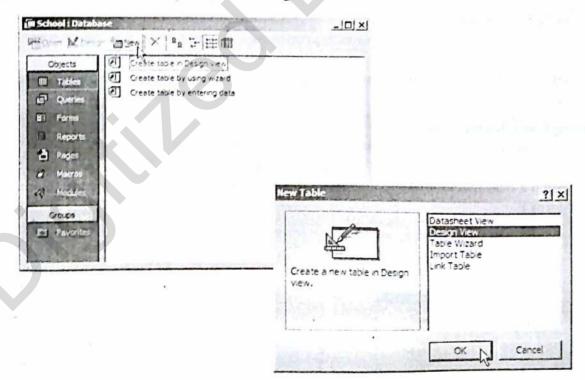
- Click on the New icon on the Standard toolbar to display New dialog window.
- Choose Database icon on the General tab from the tab list.
- Click on OK button to display File New Database dialog window.
- Type the file name in File name combo box.
- Click on Create button to finish process.



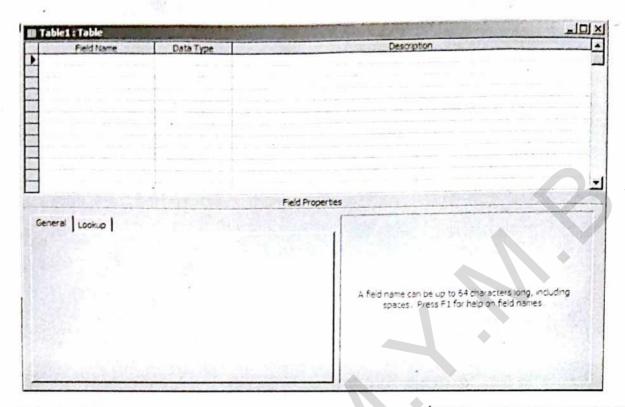
### **Creating a Table**

## To create a table using Design View

- Click the Tables icon in the Database Window.
- Click on the New Button.
- In the New Table dialog box, select Design View and click on the OK button.

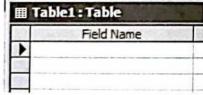


The Table will be displayed in Design format, as shown below.



#### To add a Field Name

Enter the name of the required field into the empty cell immediately below the Field Name Header. For instance you could add a field name called Roll no.



- Press the Tab key to move to the next cell.
- In the New Table dialog box, select Design View and click on the OK button.

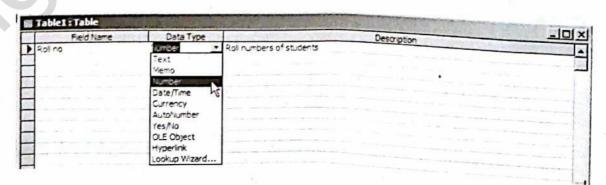
## To set the data type

The next is called **Data Type**. This allows you to control what type of data is to be entered into the field. Click on the down arrow to display a list of available options.

Select any data type for instance select **Number** for numeric data. Select **Text** for text data, and so on.

## Adding field description

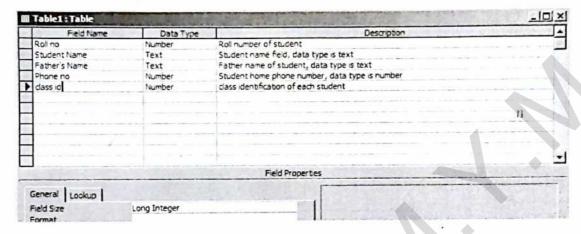
Press Tab key or Click on Description cell to enter description of desired field. It is an optional field property that allows you to explain the function of the field. Later when a user clicks within a field that contains a description, then this description will be displayed within the Status Bar.



#### To add more fields

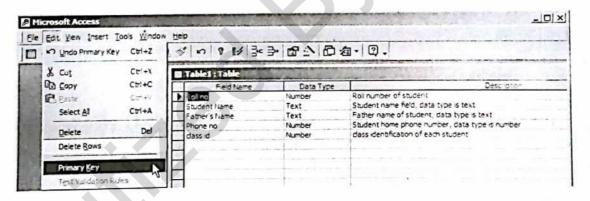
Press the Tab key to add further field names, properties and descriptions, as required.

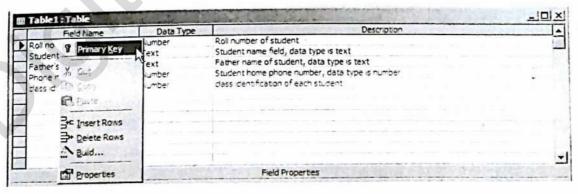
Field Name	Data Type	Description
Rollno	Number	Roll number of student
Student Name Text		Student name field, data type is text
Father's Name	Text	Father name of student, data type is text
Phone no	Number	Student home phone number, data type is number
class id	Number	class identification of each student



## **Setting a Primary Key**

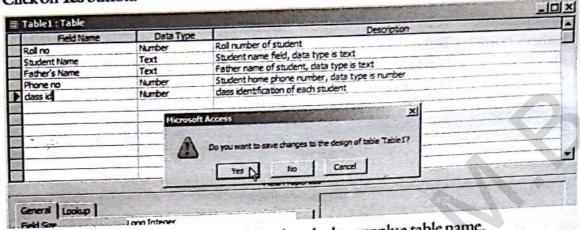
- In Table Design View, select the field you want to assign as the primary key. You can either click somewhere in the field or click on the field selector to the left of the field name.
- Choose Primary Key from the Edit menu or Click on the Primary Key icon on the Standard toolbar or right click on the Field Name column and choose Primary key from the menu.





## Saving the new table without setting a primary key

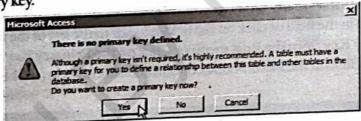
- Click on Close icon at the top-right of the table design window and a dialog window will be displayed asking if you wish to save your changes.
- Click on Yes button.



After clicking Yes button, you will be then be asked to supply a table name.



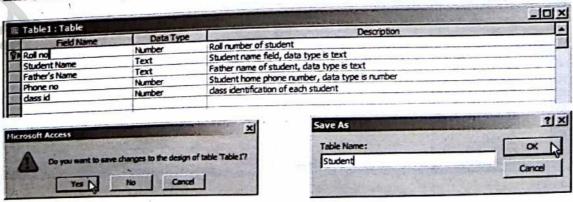
Enter the name required, and then click on the OK button. The system will then offer to supply a primary key.



Click on the Yes button to create a primary key now. Access will add another field to your table. This is called a counter field that will act as a unique id for each record in the table but it is better to specify primary key yourself before saving the table design.

## Saving the new table with setting a primary key

- Click on Close icon at the top-right of the table design window and a dialog window will be displayed asking if you wish to save your changes.
- Click on Yes button.
- Enter the name required, and then click on the OK button.

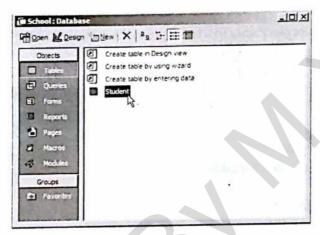




How would you Add, Delete and Restore data from a table.

## Adding data to a Table

- Click the Tables icon in the Database Window.
- Double click on the table you want to open. OR
- Select the table you want to open and Click the Open icon in the Database Window.



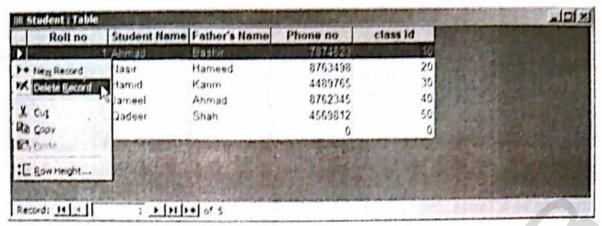
- Click on the first field of the first record, type in the data and press the Enter button. Access will automatically move the cursor to the next field of the current record.
- Once you finished enter data into all fields click on next record to enter data again.
- Click on Close icon at the top-right of the table window to keep save changing.

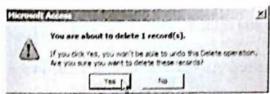
Roll no	Student Name	Father's Name	Phone no	class id
	1 Ahmad	Bashir	7874523	10
	2 Nasır	Hameed	8763498	20
	3 Hamid	Kanm	4489765	30
	4 Jameel	Ahmad	8762345	40
	5 Qadeer	Shah	4569812	50
	0		0	0

## Deleting data from a Table

- Click on record selector at the left of the record that you want to delete.
- Press DELETE key. Access will ask you for a confirmation.
- Click on the Yes button to delete the record.

  OR
- Right click on record selector at the left of the record and choose the **Delete Record** option from the menu. Access will ask you for a confirmation.
- Click on the Yes button to delete the record.

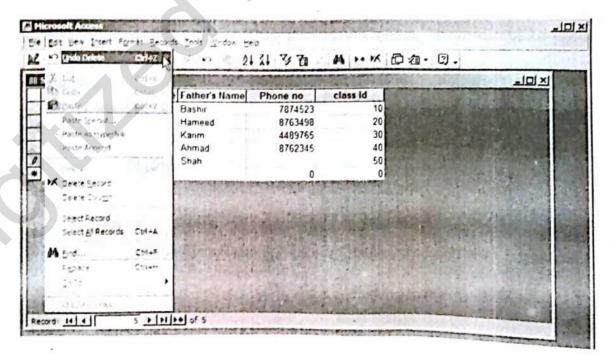




- If you want to delete/replace data in a field, place the mouse pointer near the left end of a field, the pointer will change to plus sign.
- L Click on the field, choose the entire field.
- Type in the new data you want to in the field or press the delete button to erase the data in the field.

## Restoring data from a Table

- Press the Esc button on the keyboard OR
- Click on Edit menu from the menu bar.
- Choose Undo from the Edit menu to restore deleted data. OR
- L Click on the Undo icon on the Standard toolbar to restore deleted data.





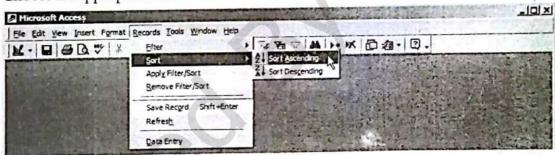
How would you sort the records of a Table in a field?

## **Sorting Data**

- Open the Student table by double clicking in the Database Window.
- Move the mouse pointer to the field name at the top of the column. The mouse pointer will change to an arrow pointing downwards.
- Click once, the whole column will be selected.

	Roll no	Student Name	Father's Name	Phone no	class id	1000年
T	1	Ahmad	Bashir	7874523	10	
1	2	Nasir	Hameed	8763498	20	4
	3	Hamid	Karım	4489765	30	是國門製
	4	Jameel	Ahmad	8762345	40	t , $t$
	5	Qadeei	Shah		50	7.7
*	0		1	0	0	20333

- Click on Records on the menu bar.
- Select Sort. A submenu will appear with the option to sort in ascending or descending order. Choose the appropriate one.



The Field selected will be sorted in the choosen order. Figure below shows the table sorted according to the Student Name field. Note that the roll numbers are no longer in ascending order.

Roll no	Student Na	me Father's Name	Phone no	class id	直接之
	1 Ahmac	Bashir	7874523	10	
	3 Hamid	Kanm	4489765	30	
	4 Jameel	Ahmad	8762345	40	
	2 Nasır	Hameed	8763498	20	
	5 Qadeer	Shah		50	
	0	SOUTH PROPERTY.	0	0	

You can also sort your data with the help of toolbar. The sort icons sorts the data in ascending order and in descending order.



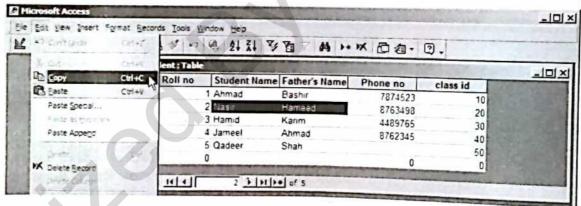
How would you copy and move data in a Table?

## To Copy Data

Select the cells that you want to copy. You can select multiple cells by placing the mouse pointer near the left end of the leftmost field so that it changes to a plus sign, drag it to select the fields you want copied. See figure below.

Roll no	Student Name	Father's Name	Phone no	class id	1
	1 Ahmad	Bashir	7874523	10	
	2 Nasir	Hameed -	8763498	20	
	3 Hamid	Karım	4489765	30	
	4 Jameel	Ahmad	8762345	40	
	5 Qadeer	Shah		50	
	0		0	0	

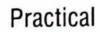
To copy the selected data click on the Copy icon button on the toolbar or Press Ctrl+C. You can also select Copy from Edit menu.



- Select the cell or cells where you want to place the copied data.
- Click the Paste icon button on the toolbar or Press Ctrl+V or select Paste option in the Edit menu. Note that the numbers of cells that you selected for copying should equal the number of cells you want to paste the data in, otherwise some data maybe lost.

#### To Move Data

To move data use the same procedure as described in the last section but choose the cut icon button from the toolbar or Press Ctrl+X or select Cut option in the Edit menu.

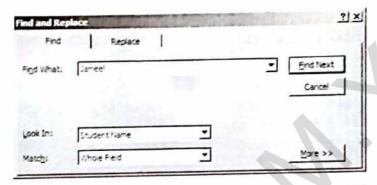




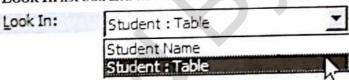
# How would you find and replace data in a

## **Finding Data**

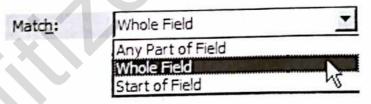
- To find data in a specific field, click on the field.
- Click on Edit menu from the menu bar.
- Choose Find from Edit menu or Press Ctrl+F. The Find and Replace dialog box will open.



- Enter the data you want to search for in the Find What text box. The field on which you clicked will be displayed by default in Look In list box.
- If you want to change the search range from one field to entire table, click on the arrow on the right of the Look In list box and choose the name of the table.



The Match list box gives you options for the way the in which the given string is to be matched. You have three choices shown in figure below.



Any Part of Field.

This locates strings that have the search string you gave as a sub-string. If you typed in'12' i n the Find What text box it will match any string containing '12' as a sub-string e.g. 1234, 121, 3421 but not 12 or 132.

## Whole Field.

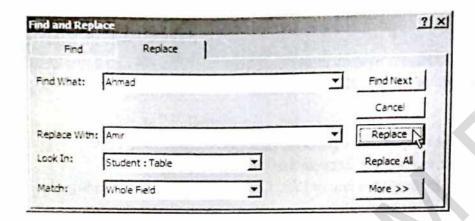
This locates only those entries that exactly match your search string.

## Start of Field.

This locates strings that begin with the search string you typed in. The search string '12'will match 1234, 124, 12 but not 1123, 1112.

## **Replacing Data**

- Click in the field where you want to search.
- Choose Replace from the Edit menu or Press Ctrl+H.



- In the Find What box, enter the text you want to replace.
- In the Replace With box, enter the text you want to substitute.
- Change and options as necessary and then click on the Find Next button. If the value searched for exists, Access will find the first occurrence of the record and highlighted the field.
- Click the Replace button. If the record is not the one you wanted, click on the Find Next button again to find the next occurrence.

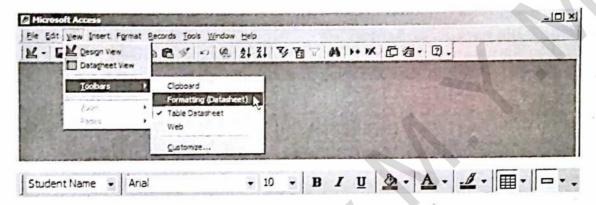
  OR
- Click on Replace All button to replace all the matching data in one step.
- Click on the Close button to complete the operation.



## How would you format data in a Table?

## **Formatting Data**

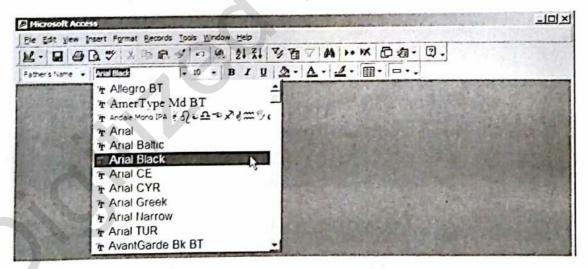
- If the Formatting toolbar is not visible, click on View from the menu bar.
- Select Toolbars from the View menu, a submenu will appear.
- Click on Formatting (Datasheet). The Formatting toolbar will appear.



Once the Formatting toolbar is visible you can easily do the following.

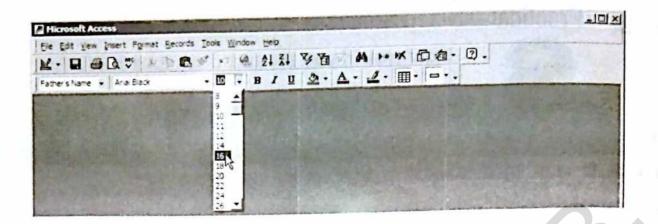
## To change the table text font

- Click on the down arrow of the Font text box. A large number of options appear.
- Choose the font style. The font of the whole table will be changed.



## To change font size

- Click on down arrow of the Font Size text box.
- Choose the font size from the drop down font size list.

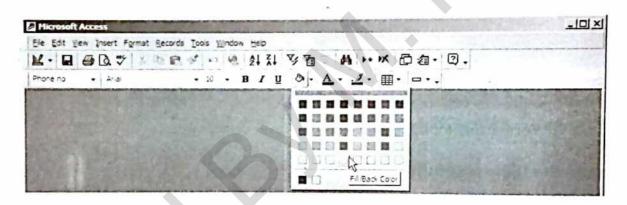


To Boldface, italicize or Underline text

Click on the buttons labeled **Bold**, **Italic** and **Underline** on the Formatting toolbar to apply these settings.

## To change table background color

- Click on down arrow of the Color Fill button to see all the available colors.
- Choose the background color of the table from drop down box.



## To change text font color

- Click on down arrow of the Font Color button.
- Choose the text font color of the table from listed available colors.

## To change appearance of the gridlines

Click on down arrow of the Gridlines button. There are four ways of displaying grid lines in your table.

Grid Icon	<b>Description</b> Both horizontal and vertical grids will be displayed.
	Only horizontal grid lines will be displayed.
	Only vertical grid lines will be displayed.
	No gird lines will be displayed.

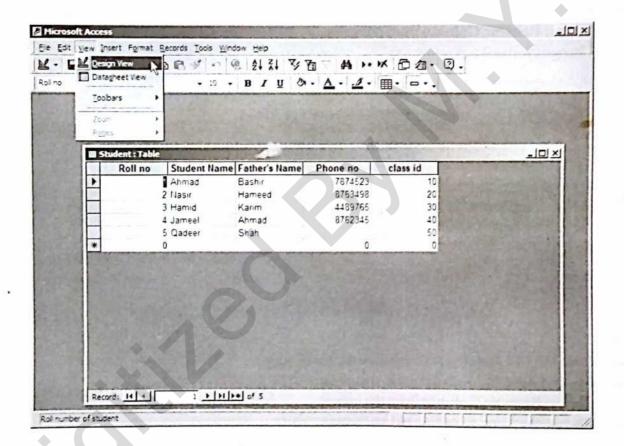
Choose the grid line style.



How would you switch between Table Design view and Datasheet view?

## To switch between Design view and Datasheet view

- Click on View menu from the menu bar.
- Choose either Design View or Datasheet View to change table view. OR
- Click on down arrow of View icon button on the Standard toolbar.
- Choose either Design View or Datasheet View to change table view.





## How would you

- 1. Change a Field name?
- 2. Insert a new Column / Field?
- 3. Delete a Column / Field?

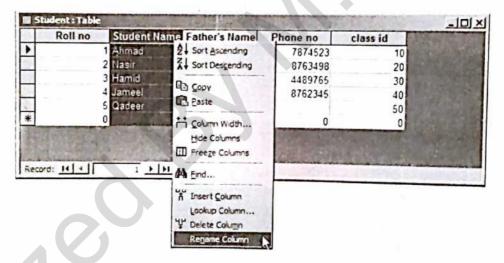
## To change a Field name

In the Datasheet View double click on the Field name at the top of the column. The field name will be selected and an I-beam pointer appears.

L Change the name according to your requirement.

OR

- Right click on the Field name at the top of the column. A drop down menu will be displayed.
- L Choose Rename Column from the menu.
- Change the name according to your requirement.



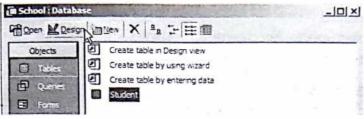
OR

- L Click on column you want to change the Field name.
- Click on Format menu from the menu bar.
- Choose Rename Column from the menu.
- Change the name according to your requirement.



## To insert a new column/field in the Design view

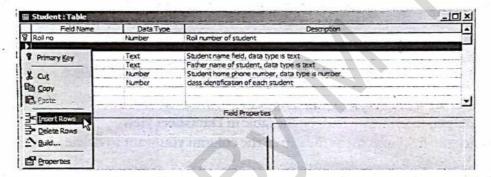
- Select the table in the Database window.
- Click on the Design icon button to open the table in Design view.



- Click on the first empty row in the Field Name column.
- Type the name of the new column.

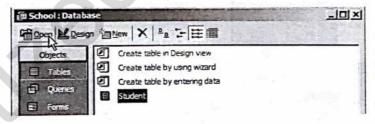
OR

- Right click on the top field, a drop down menu will be displayed.
- Choose Insert rows from the menu. A blank row will appear between the two existing fields.
- Fill in the name of the new column in the Field Name column.
- Choose the appropriate data type in the Data Type column.
- Type in optional comments about the new column in the Description field.

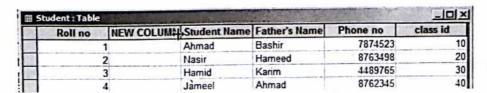


### To insert a new column/field in the Datasheet view

- Select the table in the Database window.
- Click on the Open icon button to open the table in Datasheet view.

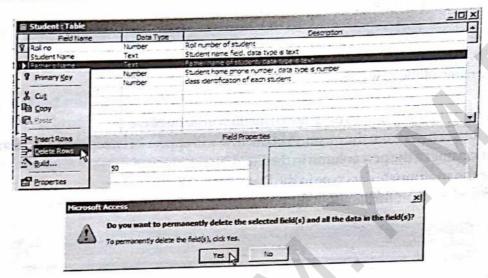


- Right click on the field selector at the top of a column. A drop down menu appears.
- Select Insert Column. A new column will be inserted to the left the column you selected.
- Double click on the column name. The column name will be selected and an I-beam pointer appears.
- Rename the column. The column name will have the data type Text as default.



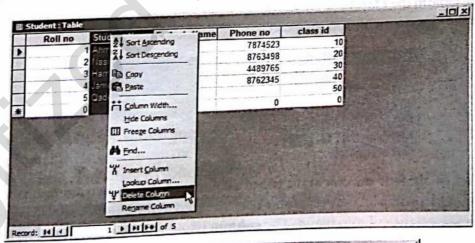
## To delete a column/field in the Design view

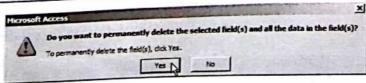
- Select the table in the Database window.
- Click on the Design icon button to open the table in Design view.
- Right click on the row selector of the column that you want to delete. A drop down menu will be displayed.
- Select Delete Rows option. Access will ask you for a confirmation.
- Click on Yes button to delete the column.



## To delete a column/field in the Datasheet view

- Select the table in the Database window.
- Click the Open icon button to open the table in Datasheet view.
- Right click the field selector at the top of the column you want to delete. A drop down menu
- Select Delete Column option. Access will ask you for a confirmation.
- Click on Yes button to delete the column.







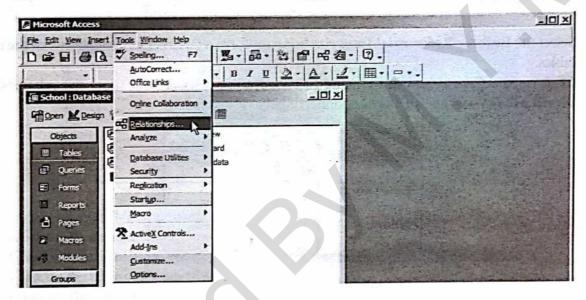


## How would you

- 1. Open the Relationship window?
- 2. Add tables to the Relationship window?
- 3. Create a relationship between two tables?

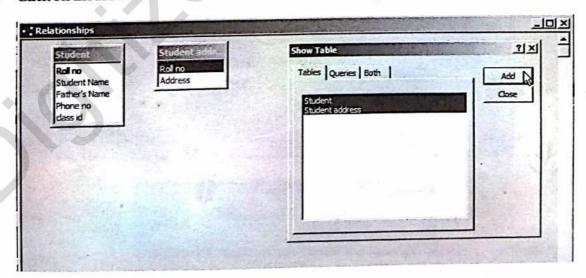
## To open Relationship window

- Click on Tools menu from the menu bar.
- Choose Relationships... from the Tools menu to display Relationships window and Show Table window to add tables to the Relationships window.



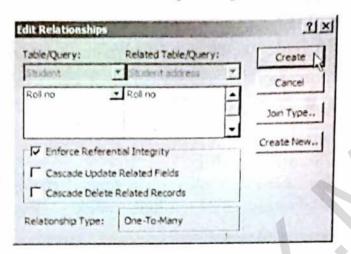
## To add tables to the Relationship window

- Select tables from tables list box under Tables tab by using the Ctrl key or Shift key.
- Click on the Add button to add tables to the Relationships window.

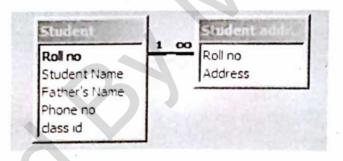


## To create a relationship between two tables

- Drag the field name from the first table to the second table. If the field in one table is a primary key (it will appear in bold), drag the primary to the corresponding key in the other table.
- The table from which you drag the field is called the primary table; the table in which you drop it is called the related table. The **Relationships** dialog box will appear as shown below.



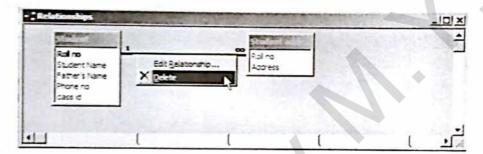
- Select the Enforce Referential Integrity box to enforce referential integrity between the two tables.
- Click on the Create button to create the relationship. Access will show the relationship between the two tables as a join line connecting the related fields.



- 1. Delete a relationship?
- 2. Remove a table from the Relationship window?

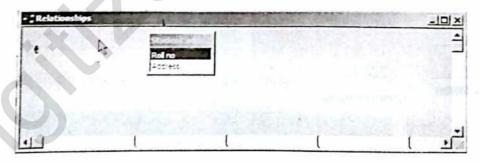
## To delete a Relationship

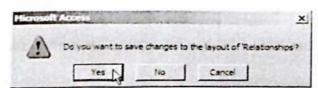
- Click on Tools menu from the menu bar.
- Choose Relationships... from the Tools menu to display Relationships window.
- Click the relationship line (between two tables) you want to delete.
- Press the Delete key or right click to show drop down menu and select Delete option to delete relationship.



## To remove a table from the Relationships window

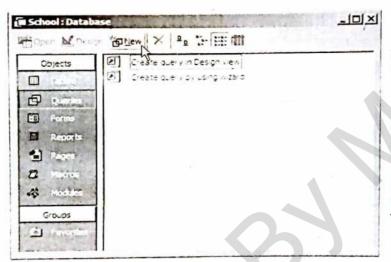
- Click on Tools menu from the menu bar.
- Choose Relationships... from the Tools menu to display Relationships window.
- Click on the table you want to remove.
- Press the Delete key.
- Click on Close icon from the top-right of Relationships window. Access will ask you to save changes.
- Click on Yes button to proceed.

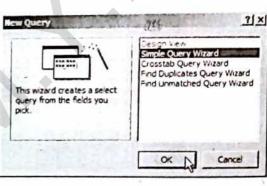




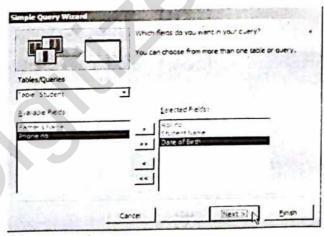
## To create a query using Simple Query Wizard

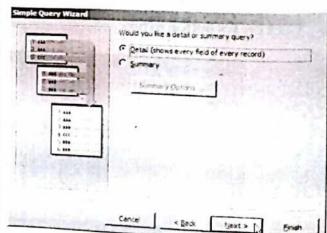
- Open the database and click the Query tab in the Database window.
- Click the New button to display a New Query dialog box.
- Select the Simple Query Wizard option.
- Click on the **OK** button to move to the next Wizard page.





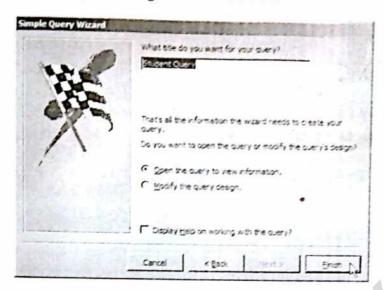
- Click on the down arrow in the Tables/Queries text box to illustrate available queries and tables from which you can select the fields.
- Select the field and click on the right-pointing arrow to add a field.
- In the example below, we have added Roll no, Student name and Date of Birth.



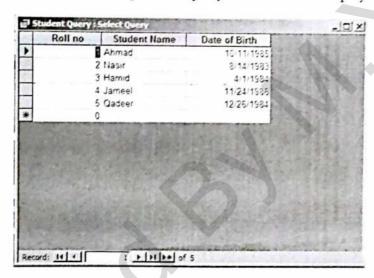


- When you have finished adding fields, click on the Next button, and another dialog box will be displayed.
- Click on the Next button to continue.

Give the query name, using the dialog box showed below.

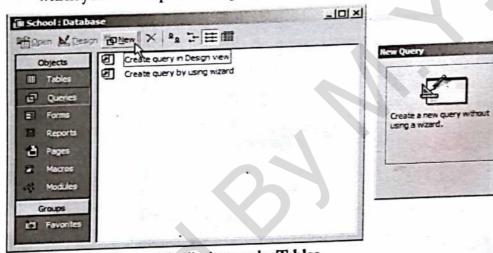


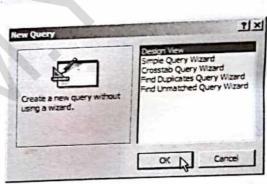
Click on the Finish button to complete the query. The results are displayed as showed below.



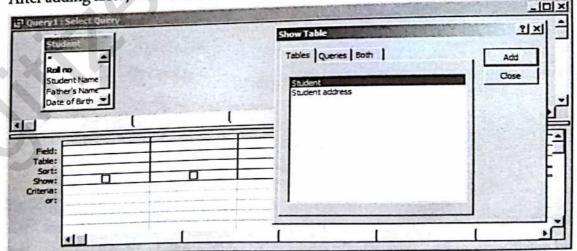
## To create a simple query using Design View

- Open the database and click the Query tab in the Database window.
- Click the New button to display a New Query dialog box.
- Select the Design View option.
- Click on the OK button. Access then open the Select Query window and displays the Show Table window on top. The Show Table window allows you to select the table (or tables) upon which you wish to perform a query.





- Select table from tables list box under Tables.
- Click on the Add button to add table to the Select Query window.
- After adding table, click on the Close button to close Show Table window.



Now you have to specify the name of fields in Query Grid. There are three ways to select field. Select and drag the field name from table and drop it to the first field cell of the first column of the Query Grid, which is where the field name must be placed. Select and drag the next field name you want from the table and drop it to the first field cell of the second column. Repeat

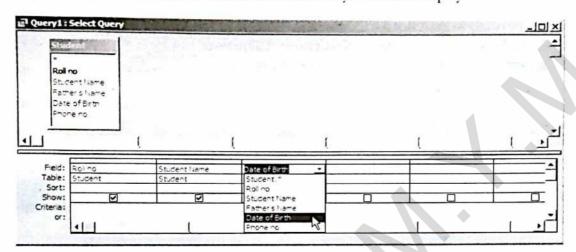
this procedure for each field you want to display.

OR

Double click on the field name in the table, the field name will be add to first field cell of the field column. Double click on the second field you want to add. Repeat this procedure for each field you want to display.

OR

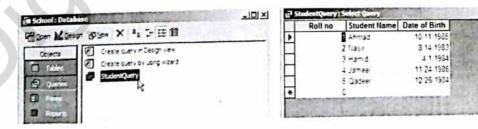
Click on down arrow of Field cell, a drop down list box will be displayed, select field name from list. Click on down arrow on the second column of the field cell, select the field name. Repeat this procedure on each column for each field you want to display.



- If you want to change sort order of any field, click on down arrow of Sort cell of desired field, a drop down list box will be displayed.
- Select Ascending or Descending order to set Sort order.
- In the Criteria row, enter the expression, Access should use to evaluate whether or should include or exclude a record.
- Click on Close icon button on the top-right of Query window. Access will ask you to save changes.
- Click on the Yes button to save the query. Access will ask you to enter query name.
- Enter the query name and click OK button to complete the query.



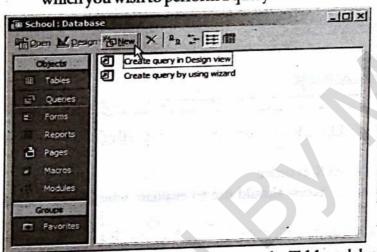
Double click on the query name in the Database window to run query. The results are showed below.

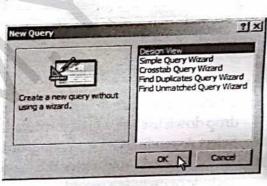


\_101×

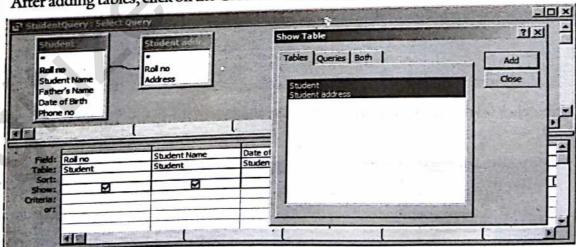
# To create a query using multiple tables

- Open the database and click the Query tab in the Database window.
- Click the New button to display a New Query dialog box.
- Select the Design View option.
- Click on the OK button. Access then open the Select Query window and displays the Show Table window on top. The Show Table window allows you to select the table (or tables) upon which you wish to perform a query.





- Select tables from tables list box under Tables tab by using the Ctrl key or Shift key.
- Click on the Add button to add tables to the Select Query window.
- After adding tables, click on the Close button to close Show Table window.



Now you have to specify the name of fields in Query Grid. There are three ways to select field. Select and drag the field name from table and drop it to the first field cell of the first column of the Query Grid, which is where the field name must be placed. Select and drag the next field name you want from the table and drop it to the first field cell of the second column. Repeat

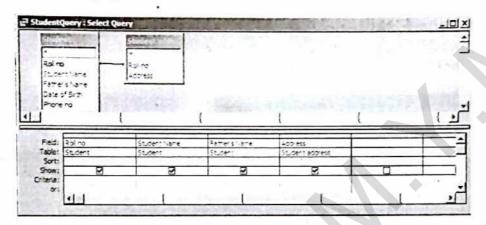
this procedure for each field and each table you want to display.

OR

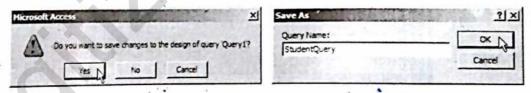
Double click on the field name in any table, the field name will be add to first field cell of the field column. Double click on the second field you want to add. Repeat this procedure for each field and each table you want to display.

OR

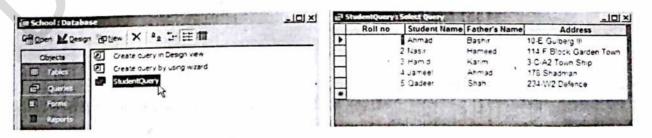
Click on down arrow of Field cell, a drop down list box will be displayed, select field name from list. Click on down arrow on the second column of the field cell, select the field name. If you want to add field name from second table, click an down arrow on the cell of Table row, select the table then select field name again. Repeat this procedure on each column for each field you want to display.



- If you have selected relationship between the tables, Access will automatically match the records by using primary key and foreign key.
- If you want to change sort order of any field, click on down arrow of Sort cell of desired field, a drop down list box will be displayed.
- Select Ascending or Descending order to set Sort order.
- In the Criteria row, enter the expression, Access should use to evaluate whether or should include or exclude a record.
- Click on Close icon button on the top-right of Query window. Access will ask you to save changes.
- Click on the Yes button to save the query. Access will ask you to enter query name.
- Enter the query name and click **OK** button to complete the query.



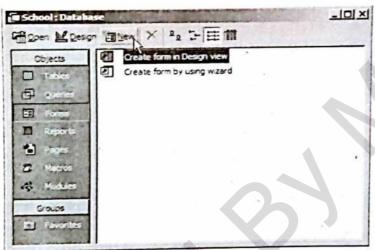
Double click on the query name in the Database window to run query. The results are showed below.

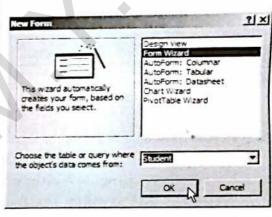


How would you create a Form using Form Wizard?

## To create a Form using Form Wizard

- Click on the Forms icon in the Database Window.
- Choose the New button, which will display the New Form dialog box.
- Select the Form Wizard.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display the next page of the Form Wizard.

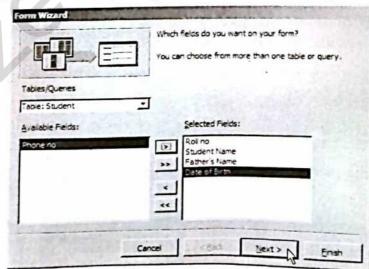




#### OR

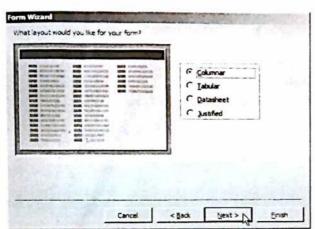
- Click on the Forms icon in the Database Window.
- Double click on Create form by using wizard, which will display the Form Wizard.

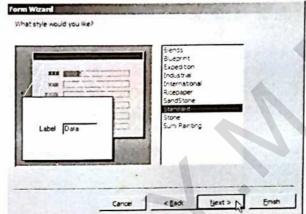




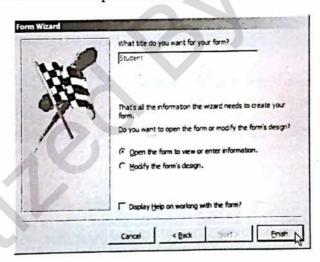
Select the table Student from the Table/Queries drop-down list if it in not already selected there by default. This would make all its fields appear in the Available Fields window below.

- Click on the field that you want to add to the form, and then click on the right pointing arrow button to add it to the Selected Fields section of the dialog box.
- Repeat this procedure so that all the required fields are added.
- Click on the **Next** button when you have added the required fields. The next dialog allows you to define the layout of the form.
- Choose the desired option and then click on the Next button.

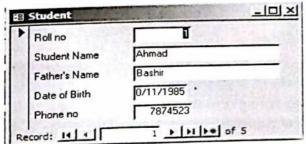




- Choose Standard option from the list box for background (style) that you want for your form
- Click on the Next button to continue. This next page of the Form Wizard allows you to name the form and set final options for using the form.
- Type a name of form in the text box.
- Click on the Finish button to complete the wizard.

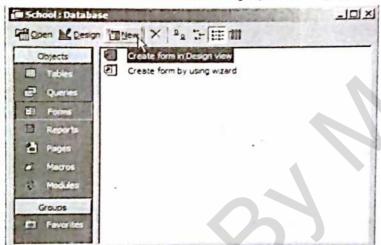


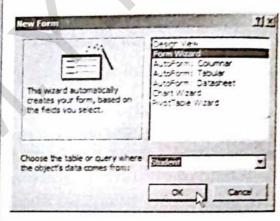
Double click on the form name (Student) in the Database Window to open the form. The form will be displayed as illustrated.



## To create a multiple table Form using Form Wizard

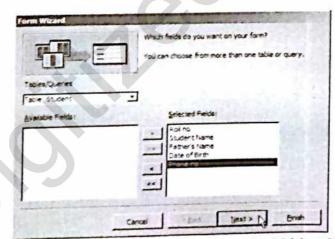
- Click on the Forms icon in the Database Window.
- Choose the New button, which will display the New Form dialog box.
- Select the Form Wizard.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display the next page of the Form Wizard.

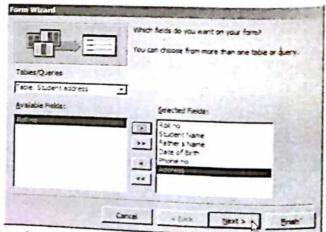




#### OR

- Click on the Forms icon in the Database Window.
- Double click on Create form by using wizard, which will display the Form Wizard.





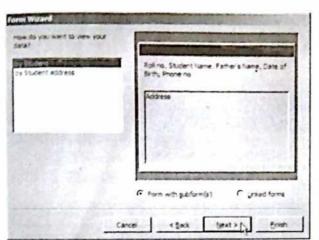
Select the table Student from the Tables/Queries drop-down list if it in not already selected there by default. This would make all its fields appear in the Available Fields window below.

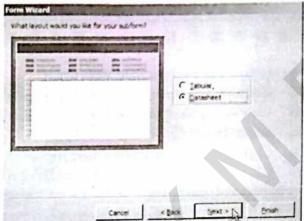
Click on double right pointing arrow to move all the Available Fields to the Selected Fields.

Select the table Student Address from the Tables/Queries drop-down list. This would make

all its fields appear in the Available Fields window below.

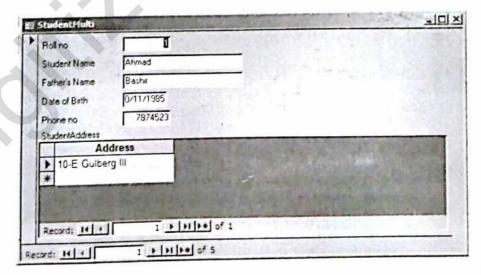
- Click on right pointing arrow to move Address field to the Selected Fields list box.
- Click on the Next button when you have added the required fields. The next dialog allows you to define the view of the form.
- Choose the option by Student and Subform(s) then click on the Next button.

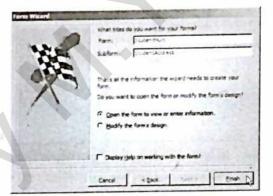




- Choose Datasheet option for your sub form layout.
- Click on the **Next** button. The next page of the Form wizard allows you to select Form style.
- Choose Standard option from the list box for background (style) that you want for your form.
- Click on the Next button to continue. This next page of the Form Wizard allows you to name this form, the sub-form and set final options for using the form.
- Type the name of Form (StudentMulti) and SubForm (StudentAddress) in the text box.
- Click on the Finish button to complete the wizard.
- Double click on the form name (StudentMulti) in the Database Window to open the form.

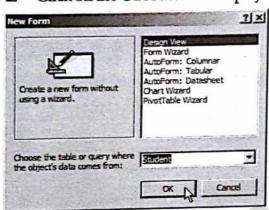
  The form will be displayed as illustrated.

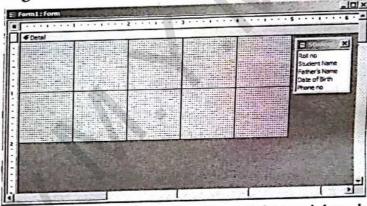




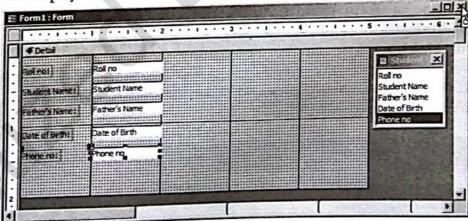
## To create a Form using Design View

- Click on the Forms icon in the Database Window.
- Choose the New button, which will display the New Form dialog box.
- Select the Design View.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display Design form.





Select and drag the field name from table and drop it to the Design form. Select and drag the next field name from the table and drop it to Design form. Repeat this procedure for each field you want to display.



- Click on the Close button on the top-right of Design form. A Save As dialog box will be displayed.
- Type the name in Form Name text box
- Click on the OK button to save form.

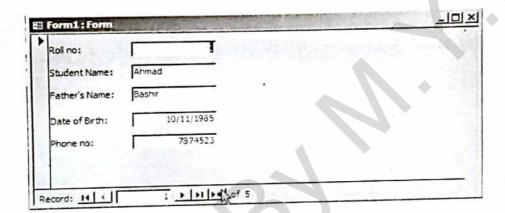




# How would you add, edit records through Form?

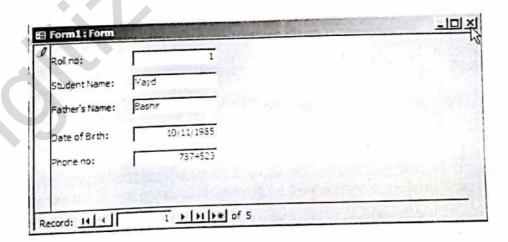
#### To add new record through Form

- Click on the Forms icon in the Database Window.
- Double click on the Form name to open.
- Click on the New Record button to move to an empty record.
- Fill all fields with the data of student.
- Click on the top-right button on the form to save and close.



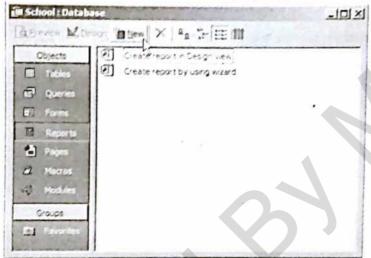
# To edit record through Form

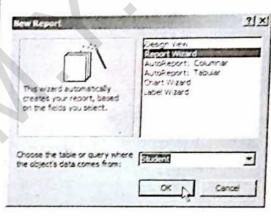
- Click on the Forms icon in the Database Window.
- Double click on the Form name to open.
- Change the Student Name from "Ahmad" to "Majid".
- Click on the top-right button on the form to save and close.



#### To create a report using Report Wizard

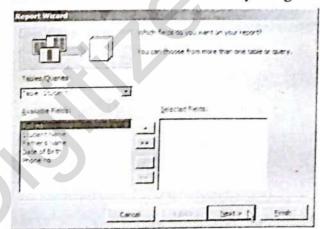
- Click on the Reports icon in the Database Window.
- Choose the New button, which will display the New Report dialog box.
- Select the Design View.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display Report Wizard dialog box.

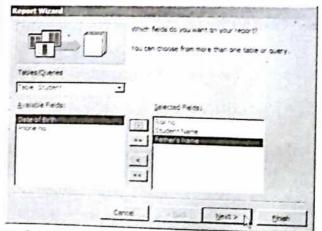




#### OR

- Click on the Forms icon in the Database Window.
- Double click on Create form by using wizard, which will display the Form Wizard.



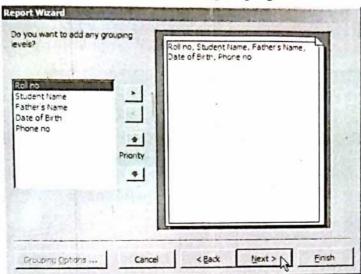


Select the table Student from the Tables/Queries drop-down list if it in not already selected there by default. This would make all its fields appear in the Available Fields window below.

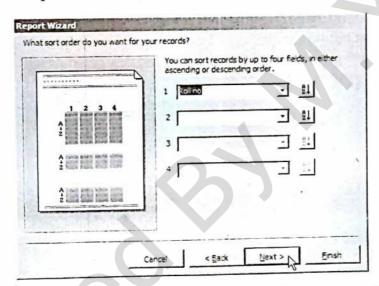
Click on double right pointing arrow to move all the Available Fields to the Selected Fields. Click on the Next button to continue.

Star Computer Practical Notebook I.C.S. Part II 42

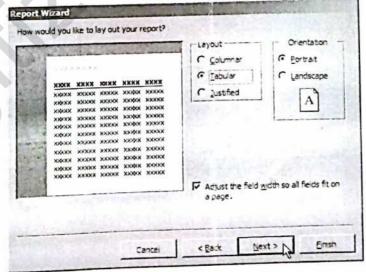
The next page that is displayed allows you to add grouping levels.



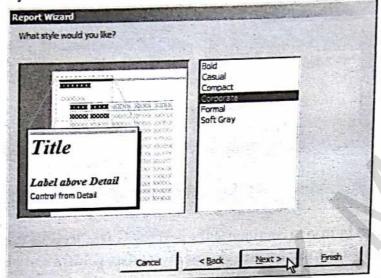
- Click on the Next button to continue to the next page of the Report Wizard.
- Click on the first drop down list box, choose the Roll no field for sort order of records.



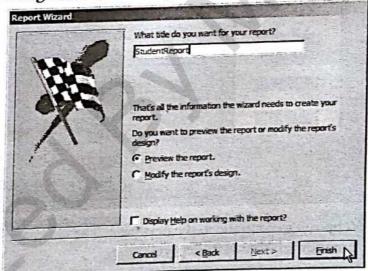
Click on the Next button to continue to the next page. The next page of the Report Wizard allows you to determine the layout of the report.



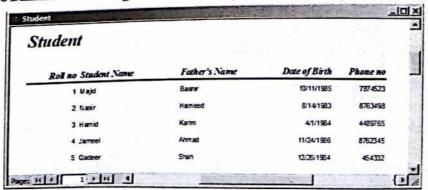
- Select the report layout Tabular from the Layout frame box.
- Select the report orientation Portrait from the Orientation frame box.
- Click on the Next button to continue. The next page pf the Report Wizard allows you to select from a range of styles.



- Select the report style Corporate from the list box.
- Click on the Next button to continue. The next page of the Report Wizard is the final page, which allows you to give a name to the report.



- Enter the report name in the top text box.
- Select the Preview this report button.
- Click on the Finish button to generate and preview this report.

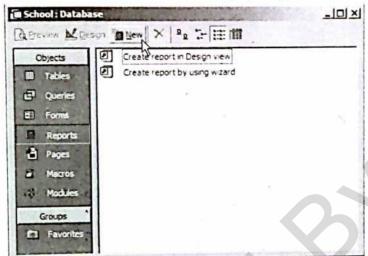


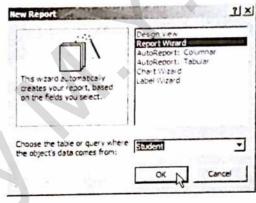


# How would you create a multiple table Report using Report Wizard?

#### To create a multiple table report using Report Wizard

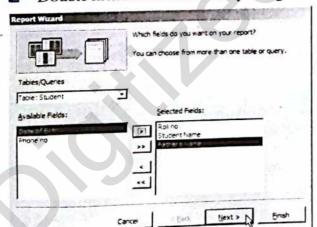
- Click on the Reports icon in the Database Window.
- Choose the **New** button, which will display the **New Report** dialog box.
- Select the Design View.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display Report Wizard dialog box.

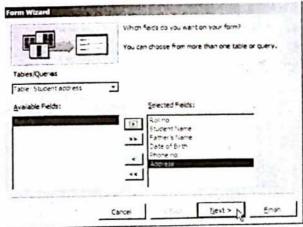




#### OR

- Click on the Forms icon in the Database Window.
- Double click on Create form by using wizard, which will display the Form Wiz rd.

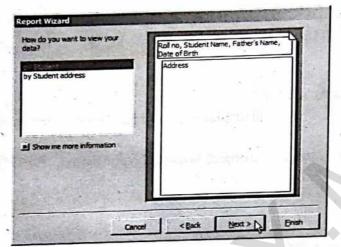




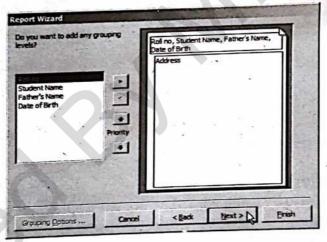
- Select the table Student from the Tables/Queries drop-down list if it in not already selected there by default. This would make all its fields appear in the Available Fields window below.
- Click on double right pointing arrow to move all the Available Fields to the Selected Fields.



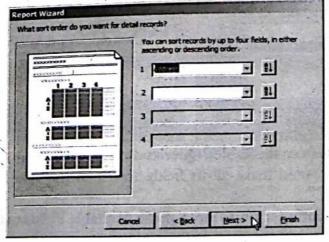
- Select the table Student Address from the Tables/Queries drop-down list. This would make
- all its fields appear in the Available Fields window below.
- Click on right pointing arrow to move Address field to the Selected Fields list box. Click o the Next button to continue. The next page that is displayed allows you to select view of your data.

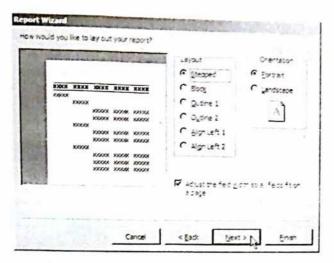


Click on the Next button to continue to the next page of the Report Wizard. The next page that is displayed allows you to add grouping levels.

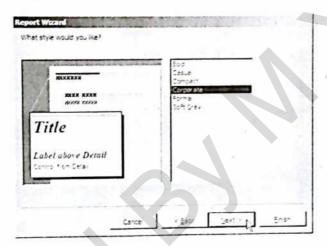


- Click on the Next button to continue.
- Click on the first drop down list box, choose the Address field for sort order of records.
- Click on the Next button to continue.

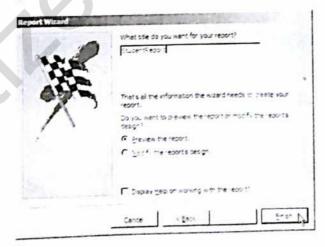




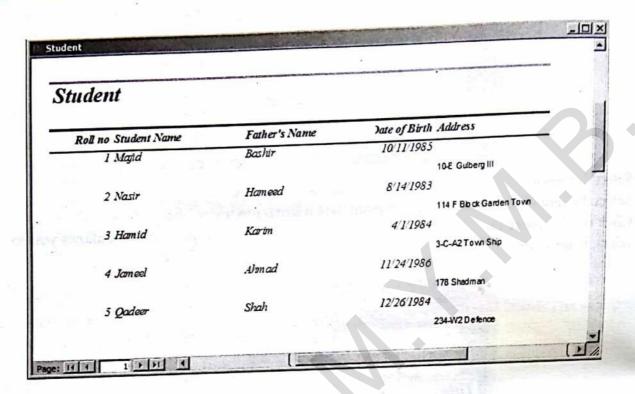
- Select the report layout Stepped from the Layout frame box.
- Select the report orientation Portrait from the Orientation frame box.
- Click on the Next button to continue. The next page of the Report Wizard allows you to select from a range of styles.



- Select the report style Corporate from the list box.
- Click on the Next button to continue. The next page of the Report Wizard is the final page, which allows you to give a name to the report.



- Enter the report name in the top text box.
- Select the Preview this report button.
- Click on the Finish button to generate and preview this report.

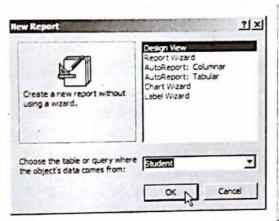


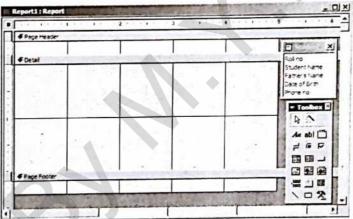


How would you create a Report using Design View?

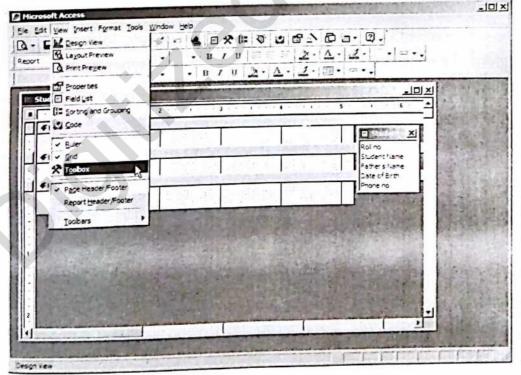
#### To create a report using Design View

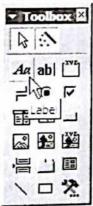
- Click on the Reports icon in the Database Window.
- Choose the New button, which will display the New Report dialog box.
- Select the Design View.
- Choose the table or query where the objects data will come from.
- Click on the OK button to display blank report template.

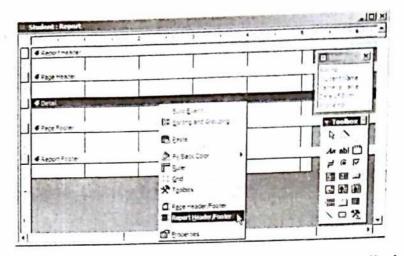




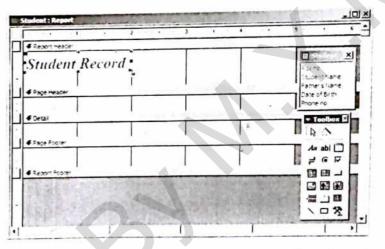
- Click on View from the menu bar. A pull down menu appears.
- Choose Toolbox from the View menu. The standard toolbox will be displayed.



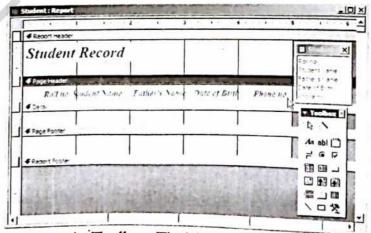




- Click the right mouse button on the Form. A pull down menu will be displayed.
- Choose the option Report Header/Footer from the menu. The Report Header/Footer bar will be appeared on the Form.



- Click on the Label tool from the Toolbox. The label tool will be selected.
- Move the mouse pointer into the Report Header section of the report template.
- Press the left mouse button and draw a rectangle (do not leave the button until you draw the rectangle).
- After draw the rectangle, an I-beam cursor will be displayed. Type the page header Student Record.

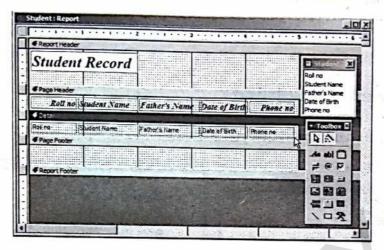


- Click the Label tool from the Toolbox. The label tool will be selected.
- Move the mouse pointer into the Page Header section of the report template.

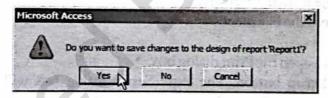
  Press the left mouse button and draw a rectangle (do not leave the button until you draw the

rectangle).

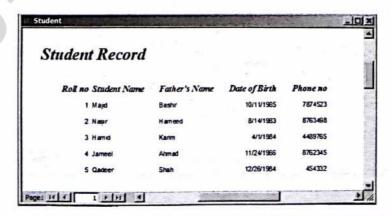
- After draw the rectangle, an I-beam cursor will be displayed. Type the column name Roll no. Repeat this procedure for each column.
- Select all columns by holding Shift key and click the mouse button.
- Change font name to Times New Roman and font size to 11 from Formatting Toolbar.



- Select and drag the field name Roll no from the Student table and drop it to the Detail
- section under the column name Roll no. When you drops the field name, you have two objects, field heading label and field name text box.
- Click on the field heading label and press the Delete button to delete it.
- Select the Roll no text box and align left to the column name Roll no.
- Repeat above procedure for each field name
- Click on each field name and set the width according to column name width.
- Click on Close icon on the top-right corner of the Report window. Access will display the dialog box for report saving.



- Click on the Yes button to save changes. A Save as dialog box will be displayed.
- Type the report name Student in the Report Name text box.
- Click on the OK button to finish the report.
- Double click on the report name in Student in the **Database Window** to open and display the report.

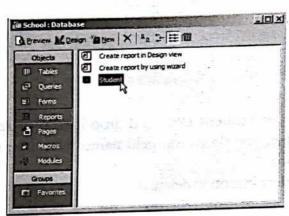


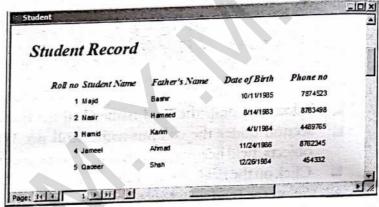


How would you Open, View and Print existing Report?

## To open, view an existing Report

- Open the database and click on the Reports icon in the Database window.
- Double click on the report that you want to view. The report window will be display.





## To print an existing report

- Open the database and click on the Reports icon in the Database window.
- Double click on the report that you want to view.
- Click on the File from the menu bar.
- Select Print from the File menu. OR
- Press Ctrl+P to open the Print dialog box.
- Click on the Setup button. The Page Setup dialog box will be displayed. Set margins,
- columns then Click on the OK button to close Page Setup window.
- Click on the OK button to print the report.

